

## Hydraloop PTU: maintenance guide

This guide contains the required steps to perform maintenance on a Hydraloop Post Treatment Unit (PTU).

What needs to be checked is the following:

- Activated Filter Media (AFM) cylinder & media
- Granulated Active Carbon (GAC) cylinder & media
- Residual disinfection dosing volume
- Distribution tank

### Service interval

The inspection of all elements of the PTU is required at the following intervals, whichever comes first:

- Annually (1x/year)  
**OR:**
- Based on treated water volume depending on GAC filter volume:
  - When 60.7 L cylinder is applied, service after: 500,000 L
  - When 105.9 L cylinder is applied, service after: 1,000,000 L

**OR:**

- When Sodium Hypochlorite levels are low, replace tank

Active maintenance is only required when results of the inspection is negative.

### Required tools and consumables

#### Necessary tools:

- Safety glasses
- Dust mask
- Chemical resistant gloves
- Water (access to tapwater or bucket with fresh water)
- Access to HDM (use phone or laptop on site, or Hydraloop online support)
- 12-20L Bucket
- Long handle scrubber
- Cloth
- Bahco (adjustable spanner)
- Waterpump plier
- Funnel

#### Necessary consumables:

- 1x 21 kg AFM media; Dryden Aqua AFM<sup>®</sup>s/ng Grade 1, particle size 0.4 – 0.8 mm
  - **Note:** other type/make of AFM could affect the working of the system negatively
- GAC media; coconut shell, washed, mesh size: 0.4 - 0.8 mm
  - 25 kg / ± 55 L for 60.7 L cylinder
  - 50 kg / ± 110 L for 105.9 L cylinder



## Service requirements

This is a general overview of the service requirements. The service procedure can be found further in this document.

- **General state of polisher:**
  - Visual inspection on leakages
  - Visual inspection on hydraulic hoses (no damage, leakage, folds, proper alignment)
  - Visual inspection on electrical cables (no damage, folds, proper alignment)
  - Functionality of all IO's; inputs/outputs such as sensors, motorized valves, etc.
- **State of AFM media:**
  - Smell should be neutral
  - AFM media has a clean look
  - AFM media should not be sticky
    - If any of the steps are **not ok**, follow procedure "replace AFM media".
- **Visual inspection of dosing pump:**
  - Suction and pressure hose should not contain air bubbles and/or leakage
    - If **not ok**, check and/or replace hose, and remove any air bubbles from pressure line by bleeding the line.
  - Jerrycan (20L) with 12.5% Sodium Hypochlorite should have > 30% filling
    - If **not ok**, follow procedure "replace jerrycan Sodium Hypochlorite"
  - Injection nozzle on distribution tank should not have any traces of leakage or blockage.
- **Visual inspection of storage tank:**
  - Tank should smell neutral (or similar, like swimming pool)
  - Tank should look clean/white inside.
    - If **not ok**, follow procedure "clean distribution tank"



## Service procedure

### 1. Remove PTU covers, to access internal components

### 2. Replace AFM media

**WARNING:** close Recycled inlet is manually, purge filters via HDM

**Caution:** Wear protective gloves, and FFP2 mask!

- a) Disconnect main input and output hose
- b) Disconnect solenoid control cable
- c) Disconnect aerator waste line
- d) Lift AFM cylinder out of housing
- e) Remove filter head, by turning it anti clockwise
- f) Turn cylinder up-side down, then gently shake out AFM media. Rinse the cylinder with water to remove the last media and clean the inside of the vessel
- g) Place the riser tube back in the centre of the cylinder and seal off the top. **Not allowing media to come inside the riser tube!**
- h) Fill up the vessel 3/4 of its total volume with new AFM media (use a funnel). Then remove the seal of the riser tube
- i) Follow previous steps f, e, d, c, b in reversed order

### 3. Replace GAC media

**WARNING:** close Recycled inlet is manually, purge filters via HDM

**Caution:** Wear protective gloves and FFP2 mask!

To replace GAC:

- a) Disconnect main input and output hose
- b) Disconnect solenoid control cable
- c) Disconnect aerator waste line.
- d) Lift GAC cylinder out of housing.
- e) Remove filter head, by turning it anticlockwise.
- f) Turn cylinder up-side down, then gently shake out most of the GAC. Rinse the cylinder with water to remove the last GAC and clean the inside of the vessel.
- g) Place the riser tube back in the centre of the vessel and seal off the top. **Not allowing media to come inside the riser tube!**
- h) Fill up the vessel 3/4 of its total volume with new GAC (use a funnel).
- i) Remove the seal of the riser tube.
- j) Follow previous steps f, e, d, c, b, in reversed order.

### 4. Replace Jerrycan Sodium Hypochlorite 12.5%

**Caution:** Wear protective gloves, FFP3 mask and full face mask/eye protection!

- a) Carefully remove the lid and lift out the suction line from the jerrycan



- b) Please closed lid on jerrycan and carefully slide the tray/box with jerrycan out of the PTU and remove the jerrycan
- c) Carefully place (capped) new jerrycan in tray/box and remove lid after sliding into PTU
- d) Place the suction hose into the new jerrycan
- e) Make sure the suction and pressure line, does not contain air. Remove any air bubbles from pressure line by bleeding the line.

## 5. Distribution tank

**Caution:** Wear protective gloves and FFP2 mask!

To clean the distribution tank:

- a) Open waste valve
- b) Fill tank up to approx. 10 – 25 % with fresh water (via HDM)
- c) Brush tank walls and floor with long handle scrubber.
- d) Drain tank (via HDM)
- e) Repeat steps b, c, d until tank is clean.
- f) Close waste valve

The tank should fill with fresh water automatically up to approx. 25 %.